

# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Sept. 8, 2010

## President dedicated Marshall 50 years ago today

*By Mike Wright*

Fifty years ago this morning, almost everyone working on Redstone Arsenal headed toward Building 4488. They wanted to see the president of the United States personally dedicate the new NASA George C. Marshall Space Flight Center in Huntsville.

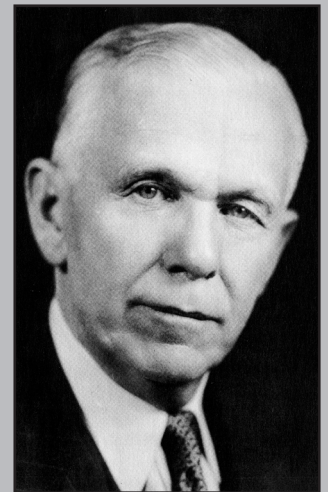
According to the Huntsville Times, about 20,000 people lined up 100 yards deep by 10:30 a.m. Sept. 8, 1960, outside the headquarters of the Army Ballistic Missile Agency, known as ABMA.

Many shifted from foot-to-foot or tried to edge their shoulders forward to get a closer look as President Dwight Eisenhower described the late U.S. Army Gen. George C. Marshall as a "man of war and builder of peace."

The dedication ceremony followed the official opening of the NASA center July 1, 1960, when more than 4,000 Army employees transferred from ABMA to NASA.

Eisenhower said he had decided to name the new center in honor of his World War II military colleague because Marshall had served as a top-ranking American general during World War II and then as a leading American statesman and man of peace. In the same way, Eisenhower explained, a large contingent of the Huntsville team that had been building missiles for the Army at Redstone Arsenal since 1950 had elected to transfer to NASA to pursue the civilian exploration of space.

Other dignitaries who participated in the ceremony included Dr. Wernher von Braun, the Marshall Center's first director; then-Alabama Gov. John Patterson; then-Huntsville Mayor "Speck" Searcy; NASA's first administrator, T. Keith Glennan; and Mrs.



Gen. George C. Marshall

*To view photos from the Sept. 8, 1960, dedication ceremony, please see pages 4-6*

*See **Dedication** on page 3*

*By Madison County, cities of Huntsville, Madison*

## Sept. 8 proclaimed 'Marshall Space Flight Center Day'

As the Marshall Space Flight Center team honors the center's 50-year legacy on Sept. 8, the City of Huntsville, the City of Madison and Madison County also are commemorating the date.

Huntsville Mayor Tommy Battle, Madison Mayor Paul Finley and Madison County Commission Chairman Mike Gillespie have jointly proclaimed

Sept. 8 "Marshall Space Flight Center Day" – exactly 50 years after President Dwight Eisenhower formally dedicated the NASA field center.

Marshall Center Director Robert Lightfoot credits the center's work force – and the people of North Alabama and the Tennessee Valley – for the achievements that led to the honor.

"None of what we have done would have been possible without the talented service of generations of employees and the incredible support of our community."

For a complete schedule of Sept. 8 events at the Marshall Center, visit Inside Marshall or read the Aug. 26 issue of The Marshall Star at <http://marshallstar.msfc.nasa.gov/8-26-10.pdf>.

## Marshall researcher takes part in launch of Japanese tether experiment

By Megan Norris  
Davidson

Marshall Space Flight Center researcher Les Johnson took part in the Aug. 31 launch of an electrodynamic tether experiment – a test flight that could enable spacecraft to maneuver in orbit without the use of on-board propellant.

Johnson, deputy manager of the Marshall Engineering Directorate's Advanced Concepts Office, is co-investigator on the mission science team for the Space Tether Experiment, known as T-Rex.

He is responsible for the experiment's flight data analysis – specifically, how future propulsive tethers might be better designed.

An electrodynamic tether is a long wire or tape that collects and conducts current when flown in the presence of a planetary ionosphere – the uppermost part of the atmosphere – and magnetic field.

The experiment flew aboard a Japanese S-520 Sounding Rocket launched from the Uchinoura Space Center in Kagoshima, Japan. The test was funded by the Japanese Aerospace Exploration Agency in collaboration with NASA.

"The data we collected will tell us how a tape tether performs in space, which we will compare to the data provided by the more-extensive Tethered Satellite System missions flown in the 1990s," Johnson said. The

Marshall-managed missions TSS-1 in 1992 and TSS-1R in 1996 both deployed long, conducting tethers from orbiting spacecraft and successfully generated a current.

For this experiment, an aluminum tether – approximately 984 feet long and slightly less than an inch wide – was folded and stacked into a box with an opening on one end. Once the rocket reached an attitude of approximately a fifth of a mile or .19 miles, a spring-loaded mechanism ejected a small spacecraft, which was attached to the rocket by the tether. As the smaller craft separated from the rocket, the tether was deployed to its full length. As the tether passed through the Earth's magnetic field and ionosphere, it collected electrons along part of its length. Though it was not measured on this flight, the Earth's field exerted a force on the tether, providing

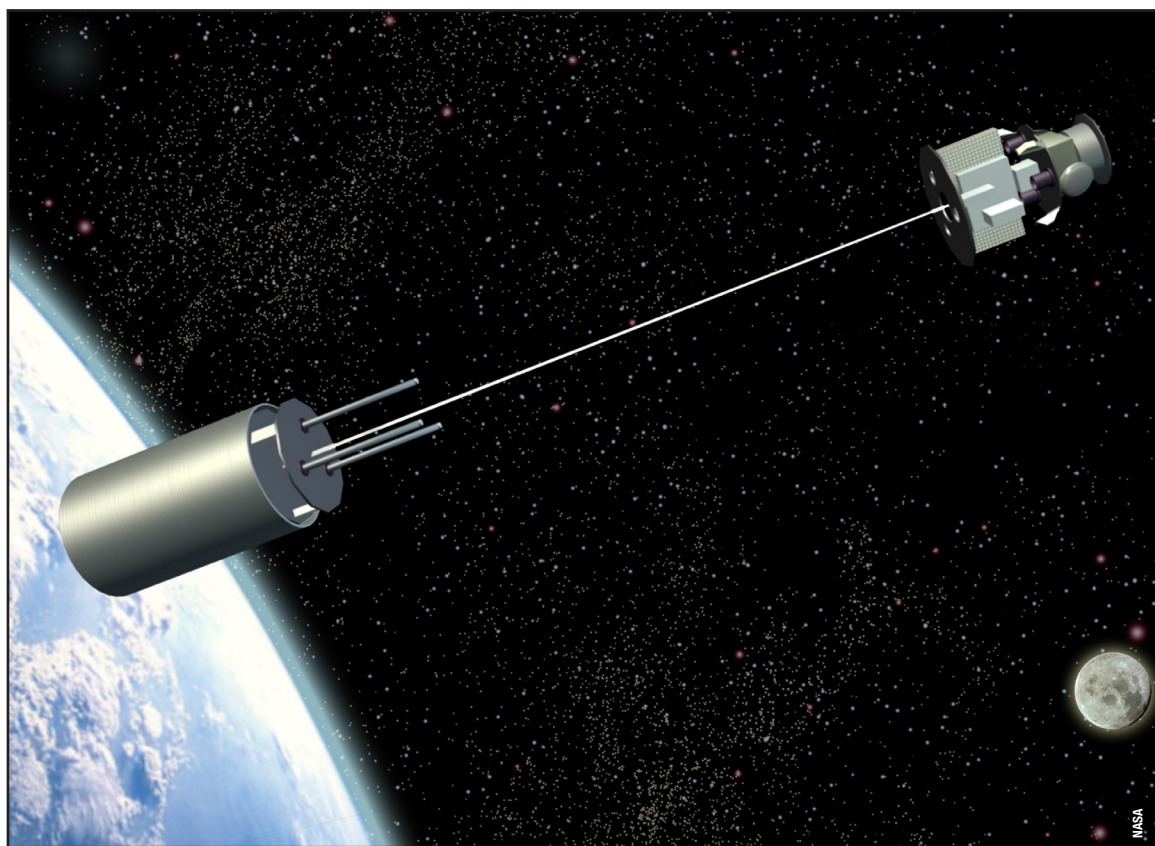
propulsion without the use of fuel. The entire experiment took about 10-15 minutes.

"Electrodynamic tethers can be directly applied to a wide spectrum of uses in space, Johnson said. "They can transfer a satellite from one orbit to another, or provide altitude maintenance for large spacecraft, such as the International Space Station."

Marshall developed a similar tether research project in 2003, but that experiment, the Propulsive Small Expendable Deployer system, or ProSEDS, was not launched.

"I am very excited about the T-Rex experiment," Johnson said. "This was our first opportunity since ProSEDS to see an electrodynamic tether fly in space. It was time."

*Davidson, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.*



Artist concept of the Japanese T-Rex Space Tether Experiment in low-Earth orbit.

Katherine Tupper Marshall, widow of the late general.

A press release issued in April, before the center opened its doors in July, stated that Marshall would have “charge of developing and launching NASA’s space vehicles and conducting related research.” It was the “only self-contained organization in the nation” which was “capable of conducting the development of a space vehicle from the conception of the idea,” through production of hardware, testing and launching operations.

“Here, under Army guidance, Redstone and Jupiter and a whole family of missiles have taken form. Here, too, was created Explorer I, America’s first Earth satellite,” Eisenhower

told the crowd. Referring to those who had decided to transfer from ABMA to NASA, he said, “The gifted scientists, engineers and technicians who splendidly served the Army are now eagerly developing, for this new organization, the gigantic launch vehicle, Saturn.”

Regarding his decision to name the center in honor of Marshall, Eisenhower recalled his association with him during World War II: “I found him immune to discouragement, relentless in carrying the war to the enemy, and unsparing of himself in his leadership of the great forces he directed.”

Eisenhower then referred to Marshall’s work after the war: “But so profound was his devotion to the constructive works of peace – so outspoken was he their advocate as Secretary of State – that he later became the symbol of renewed hope for scores of millions of suffering people through his great Plan for Europe that will forever bear his name. He became, in consequence, the only professional soldier ever to be honored with the Nobel Peace Prize.”

The highlight of the dedication

ceremony was the unveiling by Katherine Tupper Marshall and Eisenhower of the bust of George C. Marshall sculptured in 1953 by Kalervo Kallio, a well-known Finnish sculptor. Following the ceremony, the president and other visitors toured many of the facilities the Army had

transferred to NASA. After a two-hour stay on the installation, the president and his party departed.

NASA came into being Oct. 1, 1958, with the responsibility for all of the nation’s space activities, except those peculiar to or associated with national defense. In establishing the new agency, Congress declared that it “is the policy of the United States that activities in space be devoted to peaceful purposes for

the benefit of all mankind.” Upon its activation, NASA absorbed the 43-year-old National Advisory Committee for Aeronautics and expanded to a total of 11 field installations throughout the United States, in addition to its Headquarters in Washington.

By transferring a major portion of the Army rocket team in Huntsville to NASA, the new agency strengthened its

ability to develop new and larger space launch vehicles.

A booklet outlining the dedication ceremony for Marshall stated that “its major mission was to develop an efficient and reliable system for lifting multi-ton loads into orbit around the earth and into deep space.” The vehicle under development was called Saturn, expected at the time to “ultimately be capable of transporting men around the moon and back to Earth, or placing instruments on Mars and Venus.”

Other initial Marshall programs included the development and testing of a modified Redstone vehicle for the Mercury manned spacecraft program; launching a series of space probes and Earth satellites with the Juno II booster; managing the development of the Agena and Centaur rocket systems; developing suitable support and testing equipment for all programs; and conducting related and supplementary research related to space exploration.

In 1961, Marshall’s Mercury-Redstone vehicle boosted America’s first astronaut, Alan B. Shepard, on a suborbital flight. However, Marshall’s first major program was development of the Saturn rockets, the largest of which boosted humans to the moon in 1969. The center also developed the Lunar Roving Vehicle for transporting astronauts on the lunar surface on the last three Apollo lunar missions.

*Wright is the Marshall Center historian.*

*“I found him immune to discouragement, relentless in carrying the war to the enemy, and unsparing of himself in his leadership of the great forces he directed.”*

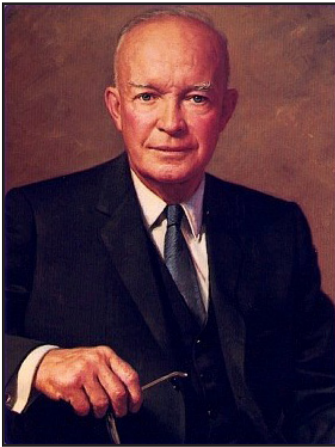
*— President Eisenhower, regarding his decision to name the center in honor of George C. Marshall*

## George C. Marshall’s stars



In 1989, the Marshall Space Flight Center accepted a plaque containing the five-star insignia of General of the U.S. Army and former Secretary of State George C. Marshall. Astronaut Richard Mullane, center, presented the plaque to then-Center Director Jack Lee, left. The insignia flew aboard space shuttle Atlantis on STS-27 with Mullane as a crew member. At right is Gordon R. Beyer, president of the George C. Marshall Foundation in Virginia. Today the plaque is on permanent display in the lobby of Building 4200 along with a bust of Marshall.

# Dedication of Marshall 50 years ago



*From Presidential Executive Order dated March 15, 1960:*

*...WHEREAS the late General of the Army, George C. Marshall devoted his life to the service of his country and to the advancement of the cause of peace throughout the world:*

*...NOW, THEREFORE, by virtue of the authority vested in me as President of the United States, I hereby designate the facilities of the National Aeronautics and Space Administration at Huntsville, Alabama, as the George C. Marshall Space Flight Center; and such facilities shall hereafter be known and referred to by that name.*

*DWIGHT D. EISENHOWER*

President Dwight Eisenhower arrives at the Redstone Army Airfield for the Marshall Space Flight Center's dedication ceremony Sept. 8, 1960.



Then-Alabama Gov. John Patterson, left, welcomes Eisenhower to Huntsville.

# Dedication of Marshall 50 years ago



Dr. Wernher von Braun, Marshall's first center director, welcomes Eisenhower to the new Marshall Space Flight Center.

The president speaks at Marshall's dedication ceremony.



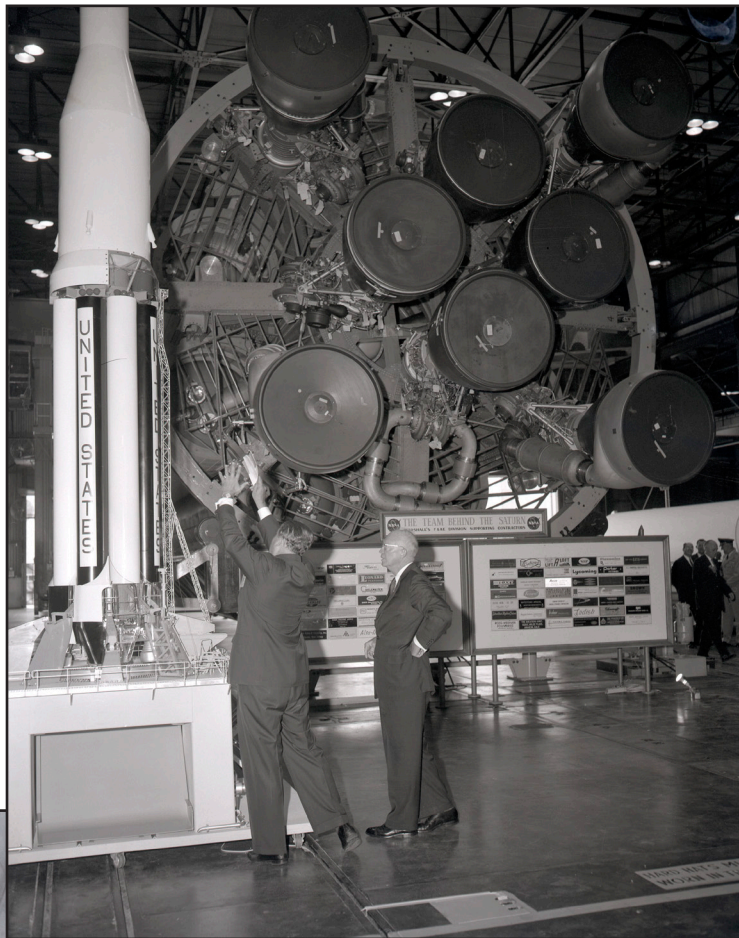
Eisenhower and Katherine Tupper Marshall unveil a bust of her late husband, Gen. George C. Marshall.

# Dedication of Marshall 50 years ago



Eisenhower tours the Marshall Center with von Braun.

Von Braun  
discusses the  
Saturn rocket  
with the  
president.



Eisenhower tours Marshall with Dr. T. Keith Glennan, NASA's first administrator.

## *NASA Mail Facility switches to UPS for domestic, ground shipments*

The NASA Mail Facility and the shipping and receiving areas will begin using United Parcel Service, or UPS, for all small package domestic express and ground shipments in support

of the General Service Administration's second generation contract award for domestic delivery services.

Daily FedEx pickups will be discontinued and replaced with UPS for

all official small package government shipments.

For any questions concerning this federal initiative, please contact Nancy Jane Spears at 544-7561.

## Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Marshall Star Ad Form."

Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue, Sept. 16, is 4:30 p.m. Thursday, Sept. 9.

### **Miscellaneous**

Training kennel, approx. 2.5' x 4', \$60. 256-679-5927

Yakima roof rack \$100; Thule tire rack, \$75; Thule two-bike rack, \$250; weedeater, \$50. 256-658-8241.

Football ticket, car pass, Tennessee State University Homecoming, Nov. 6, \$50 obo. 256-651-9909

5 -X-8 utility trailer, \$350. 256-658-6353

Xbox 360 Elite, 120 gig HD, wireless controller, \$150. 256-655-4044

Small executive desk, solid wood, 29wide x48long x 30high, \$150. 256-882-0461

Sectional couch, brown, queen sleeper, \$500; oak entertainment center, holds 27" TV, \$100. 256-882-0461

Egnater Rebel 30 Guitar Amplifier, 30 watt two channel tube head. \$550. 256-679-2165

Specialized Rockhopper bicycle, 21 speed, Cateye cyclocomputer, frame pack, pump, accessories. 313-254-4246

Havanese female, 18 months old, AKC champion bloodlines, silver/cream/black, \$650. 931-455-7303.

Vintage Raleigh Sport three-speed, Sturmey-Archer internally geared hub, rack, fenders, \$200 obo. hahnpv@gmail.com

Stainless steel grill, four burner, side burner, \$80. 256-457-5823

24 Wilson Grand Slam tennis balls, number WRT1043, 8-pack can unopened, \$28. 256-828-1234

Sugar bear/sugar glider, 6 months old, cage, accessories, \$200 obo. 931-993-3204

60 --- 65 black cows & calves, two young purebred Angus bulls. 256-385-2908

Gemeinhardt 3B flute, silver, plugs cleaning rod, hard case, \$900. 256-714-4216

Pilates on a stand, \$150 firm. 540-604-8289

### **Vehicles**

2007 Jayco pop-up camper, sleeps four, \$3,300. 256-468-3134

2005 Chevy Silverado, regular cab, 4X4, six-cylinder, five speed, tow package, 108k miles, \$7,900.00.

256-683-4758

2005 Ford Mustang GT, white, five-speed, leather, charcoal interior, 79k miles, \$13,800. 256-682-5455

2002 RV Winnebago Adventurer, 35', V-10 Ford engine/chassis, two slide-out rooms, 45k miles, \$40,000. 256-527-8362

2001 Honda Odyssey EX, dark green exterior, six-disc CD player, 120k miles, \$6,000. 256-859-4437

1999 Pontiac Grand Am GT, black, gray cloth interior, 72k miles, \$6,500. 256-508-5503

1998 Stingray RS180 Bowrider, seats seven, bimini covers, fish/ski, new 140 I/O, \$9,500. 256-640-6427

1998 GMC pickup, white, LWB, 184k miles, \$4,500. 256-468-9377

1995 Toyota T100, 205k miles, \$1,200. 256-653-2931

1994 Crown Victoria LX, all power accessories, 69k miles, \$2,500. 256-520-9244.

### **Found**

"Body Glove" belt clip cell phone case, found on walkway between 4200 and 4203. 256-544-4680

# Information Assurance Conference works to protect cyberspace

## Digital battlefield continues to challenge Army, NASA alike

How safe are our networks?

Marshall Space Flight Center has joined forces with the U.S. Army at Redstone Arsenal for over 10 years to bring speakers from all over government and industry to discuss the threats in the world or information technology security. This year's conference is no exception. Titled Securing the Network: The Digital Battlefield, the conference will be Sept. 21-22 at the Bob Jones Auditorium on Martin Road.

"We recognized that IT Security Awareness Training is a requirement that must be met," said Judy Darwin, IT specialist in the IT Security Office of the Office of the Chief Information Officer. "However, the goal for the Marshall IT Security Office is to increase security effectiveness by trying to change users' behaviors, not just make them aware."

"For this year's topics, we have selected speakers to address social media, cyber threats and hacking techniques everyone should be aware of. There is something for everyone," said Darwin.

The conference raises awareness of the threats we are facing today in military and in government. Real world issues are discussed, and solutions are

addressed about how IT professionals can prevent threats – internal and external – from occurring. Attendees will learn about current security threats from experts, and will have an opportunity to ask questions and share knowledge with other IT professionals in the security field.

Vendors will be set up in the lobby for conference attendees to view the latest security products. There is no cost to attend the conference. However, all attendees must register online at <http://www.technologyforums.com/10RE/>.

Today more than ever, IT security is important to not only system administrators, data base developers and IT specialists, but to all employees, who should make network and computer security a number one priority. NASA civil service employees and contractors are welcomed to attend the conference both days. Rayner Walker is the Army coordinator and IT specialist with the Army Signal National Enterprise Center at Redstone Arsenal.

The conference will include:

- "The Wild, Wild Web: Knowing the Basics for Online Investigations," presented by Jane Hitchcock, president of Working to Halt Online Abuse. The presentation will include information on the influences and dangers of social networking, and how it affects

the government.

- "State of the Hack," presented by Chad Tilbury, certified instructor of software security from the SANS Institute.
- "Hacking Techniques: Hacking Stuff," presented by Rob Murphy, deputy chief information officer for the U.S. Marine Corps Marine Barracks in Washington.
- "The Most Likely Cyber Threat: Terrorists Enabled by Cyber Criminals," presented by Dr. Steven Bucci, cyber lead for Global Business Services of IBM Corp.
- "Google vs. China, Our First Cyber War," presented by David Strom, president of David Strom Inc.
- "Social Penetration – Exploiting Users in the Web 2.0 World," presented by Aaron Cohen, president of MAD Security.

The full agenda is available on the website at <http://www.technologyforums.com/10RE/>.

The conference has been held at Redstone since 1999. Through the years, it has been jointly hosted by Garrison, Aviation Missile Command, Missile Defense Agency, Space and Missile Defense Command, Aviation and Missile Research Development and Engineering Center, and the Marshall Center.

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